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Relationship of self efficacy, physical symptoms and general well-being of chronic kidney disease patients: A pilot study

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Abstract
Chronic kidney disease (CKD) is one amongst the chronic diseases across the globe, Stage four & five of CKD necessitates patients to either go for renal transplantation or for lifelong haemodialysis therapy. In case of haemodialysis therapy self efficacy becomes critical to manage chronic kidney disease, so symptom control, and hence general well-being. The objective of the pilot study was to investigate the relationship of self efficacy, physical symptoms and general well-being of chronic kidney disease patients. In this study a quantitative research approach, co-relational research design was adopted. Total fourteen CKD patients, who were undergoing haemodialysis, were selected by purposive sampling technique and data was collected by Self-Efficacy for Managing Chronic Disease 6-Item Scale, self report physical symptoms assessment scale & PGI General Well-Being Measure. Results of the pilot study showed that there was inverse (negative) moderate correlation between the self efficacy & physical symptoms ($r = -0.52$, $p>0.05$); physical symptoms & general well being ($r = -0.65$, $p<0.05$).

Keywords: chronic kidney disease, relationship, self efficacy, physical symptoms, general well-being

Introduction
The number of persons with chronic diseases is increasing with population growth, increase in elderly population, urbanisation and increase in prevalence of obesity and inactive lifestyle. Chronic diseases are diseases of long time duration and progresses slowly. The chronic disease management is concerns of importance in health care. Most of Chronic diseases are not curable; control of progression & prevention of associated complications becomes a chief goal.
Chronic kidney disease (CKD) is one amongst the chronic diseases across the globe, with an increase in incidence, prevalence and high cost of management. Increase prevalence of non-communicable diseases such as hypertension and diabetes contributes to the development of CKD. The prevalence of CKD is rising globally & is estimated to be 8-16% worldwide. According to global Burden of Disease Study in the 2015, CKD mortality increased by 31.7% from the last 10 years is ranked twelfth common reason of death i.e. about 1.1 million deaths globally.
CKD is classified into five distinct stages mainly based on decrease in glomerular filtration rate (GFR). These stages are from stage one to stage five. In stage four & five, GFR becomes much less, which necessitates patients to either go for renal transplantation or for lifelong haemodialysis therapy.
In case of haemodialysis therapy self efficacy becomes critical to manage chronic kidney disease i.e. control of pathogenesis of the disease process, so symptom control, and hence general well-being.
Disease-related self-efficacy is considered a critical feature in the successful daily self-management of chronic diseases & considered as one of the factors influencing health status of chronic disease patients. Self-efficacy is defined by Bandura A. (1977) as an "individual's confidence in their ability to overcome barriers in order to perform disease-specific self-management behaviours". It is thought to control pathogenesis of the chronic disease process, symptom control, improve quality of life and hence general well-being.
Investigator felt to determine, whether there is any relationship between self efficacy & physical symptoms and physical symptoms & general well-being of chronic kidney disease patients; hence investigator felt the need to conduct study to assess the relationship of self efficacy, physical symptoms and general well-being of chronic kidney disease patients

Statement of the problem
Relationship of self efficacy, physical symptoms and general well-being of chronic kidney disease patients: a pilot study

Objectives of the study
1. To assess the self efficacy, physical symptoms & general well-being of chronic kidney disease patients.

2. To determine the relationship of self efficacy & physical symptoms of chronic kidney disease patients.
3. To determine the relationship of physical symptoms & general well-being of chronic kidney disease patients.

Assumptions
1. Chronic kidney disease is a potential health problem among middle aged and old aged person.
2. Self efficacy, physical symptoms and general well-being are measurable.

Delimitations
1. The study is delimited to patients suffered from chronic kidney disease (stage four & stage five) and undergoing haemodialysis.
2. This study will confine itself to self report measure to collect the data.

Hypotheses
H1: There is a significant correlation of self efficacy & physical symptoms of chronic kidney disease patients.
H2: There is a significant correlation of physical symptoms & general well-being of chronic kidney disease patients at post test

Material and Method
Research approach: A quantitative, non-experimental research approach was adopted for the present study.
Research design: A co-relational research design was adopted for the present study.
Setting of the study: This study was conducted at dialysis unit of Jawaharlal Nehru Medical College & Hospital (JNMCH), Aligarh, Uttar Pradesh, India.
Accessible Population: Accessible Population for the study consists of chronic kidney disease patients came for haemodialysis at dialysis unit.
Sample size & Sampling technique: The sample size of the present study is fourteen. Sample for the present study was selected by non-probability, purposive sampling technique.

Sampling criteria
Inclusion criteria
1. Chronic kidney disease patients (stage four and stage five) that are undergoing haemodialysis routinely, in the age group of 19 to 80 years.
2. Chronic kidney disease patients who are able to read Hindi language.

Exclusion criteria
1. Chronic kidney disease patient who is documented case of psychiatric disorders.
2. Chronic kidney disease patients who are not willing to participate in the research study.

Tools of data collection: Following tools will be used to collect data for the study.
1. Self efficacy will be measured by "Self-Efficacy for Managing Chronic Disease 6-Item Scale developed by Stanford Patient Education Center".
2. Physical symptoms measured by self report measure, physical symptoms assessment scale, it is rating scale developed by the investigator
3. General well being measured by PGI General Well-Being Measure (GWBM). General Well-Being Measure is a standardised stress scale developed by Dr. S. K. Verma and Ms. Amita Verma (1989).

Reliability of Tools: The reliability of Self-Efficacy for Managing Chronic Disease 6-Item Scale, physical symptoms assessment scale and General Well-Being Measure were found 0.93, 0.77 and 0.81 respectively.

Data collection method: The purpose of study explained to chronic disease patients after providing participant information sheet & written informed consent was obtained. Data were collected, using Self-Efficacy for Managing Chronic Disease 6-Item Scale, physical symptoms assessment scale & General Well-Being Measure.

Results: Findings of the study revealed that a hefty of the subjects (71.2%) belonged to the age group more than 60 years & almost male and females were equitably (57.14%**,** 42.85%**)** represented in the study. Maximum subjects (85.71) were married & belonged to urban area. The educational status of half of the subjects was graduate & above & most of the subjects in the study (42.85) were retired. Major part of the subjects (85.71) belonged to Muslim religion & joint family. Data also shows that maximum subjects in the study (57.14%) had total family income less than 5000 Rupees. Majority of subjects (57.14) were diagnosed as having CKD since 1-5 years ago & a hefty (71.4%) were undergoing haemodialysis since more than 2 years. The interdialytic weight gain of maximum subjects (71.42%) was in the range 1-2 Kg. It was also observed that serum creatinine level was more than 2.0 mg/dL for all subjects in the study. It was further observed that 87.14 percent of subjects had co-morbidities as hypertension.

Table 1: Frequency (percentage), range, mean ± standard deviation (SD) of self efficacy, physical symptoms & general well-being of chronic kidney disease patients.

N = 14

Variable	Criteria	Frequency (%age)	Range	Mean ± SD
Self efficacy	Low self efficacy (0-20)	03 (21.42)	17-40	28.57 ± 6.83
	Moderate self efficacy (21-40)	11 (78.57)		
	High self efficacy (41-60)	0 (0)		
Physical symptoms	Non distress (0)	0 (0)	14-38	27.35 ± 7.51
	Mild distress (1-18)	2 (14.28)		
	Moderate distress (19-36)	9 (64.28)		
	Severe distress (37-60)	3 (21.42)		
General wellbeing	Low General wellbeing (1-6)	0 (0)	7-16	11.21 ± 2.15
	Moderate General wellbeing (7-13)	13 (92.85)		
	High General wellbeing (14-20)	1 (7.14)		

Data presented in Table 1 depicted that maximum subjects (78.57%) had moderate self efficacy with mean of 28.57 ± 6.83. A hefty of the subject (64.28%) had moderate distress in physical symptoms with mean of 27.35 ± 7.51. Almost all subjects (92.85%) had moderate general wellbeing in the study with mean of 11.21 ± 2.15.

Table 2: Pearson's correlation coefficient (r) value & P value of of self efficacy & physical symptoms; physical symptoms & general wellbeing

N=14

Variables	Pearson's correlation coefficient (r) value	P value
Self efficacy & Physical symptoms	-0.52	0.055
Physical symptoms & General well being	-0.65	0.011*

df= 12, absolute critical value of 'r' = 0.532, *=Significant

Table 2 showed that there was negative moderate correlation (r = -0.52) between the self efficacy & physical symptoms. Relationship between self efficacy & physical symptoms of chronic kidney disease patients not found significant (p>0.05). Table 2 also depicted that there was negative moderate correlation (r = -0.65) between the physical symptoms & general well being. The relationship between physical symptoms & general well being of chronic kidney disease patients found significant (p<0.05).

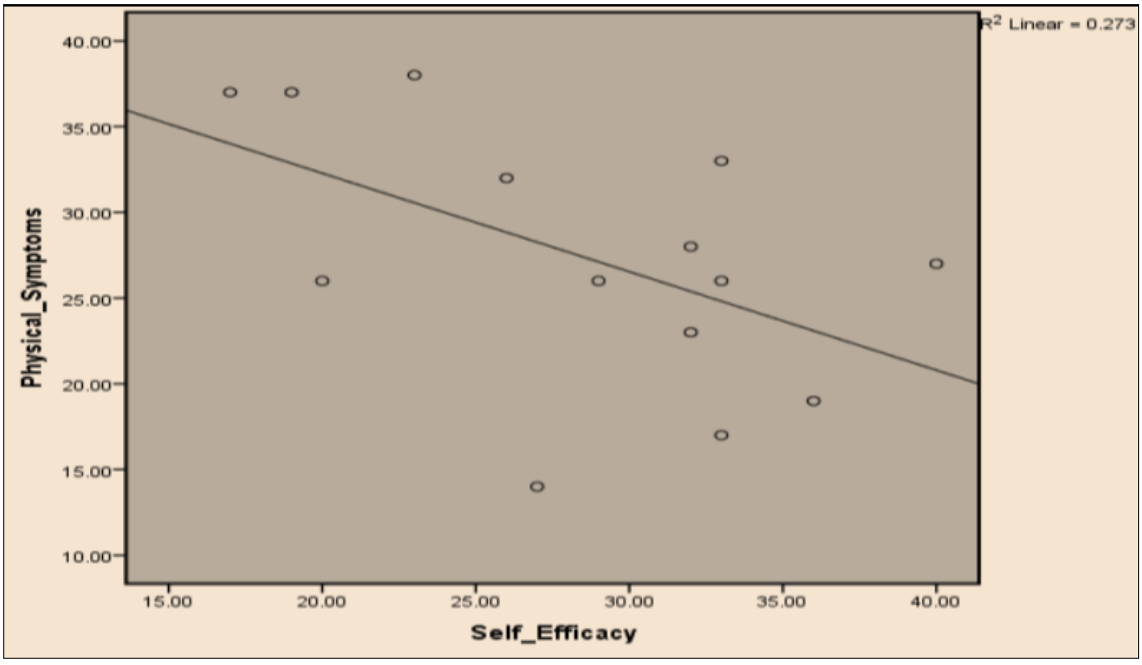

Fig 1: scattered diagram showing correlation self efficacy & physical symptoms

The scattered plot in Fig.1 revealed that the points are reasonably scattered about an underlying straight line so we can say that there is moderate degree of negative linear correlation between self efficacy & physical symptoms of chronic kidney disease patients & it suggest that as the self efficacy decreases, physical symptoms of chronic kidney disease patient increases.

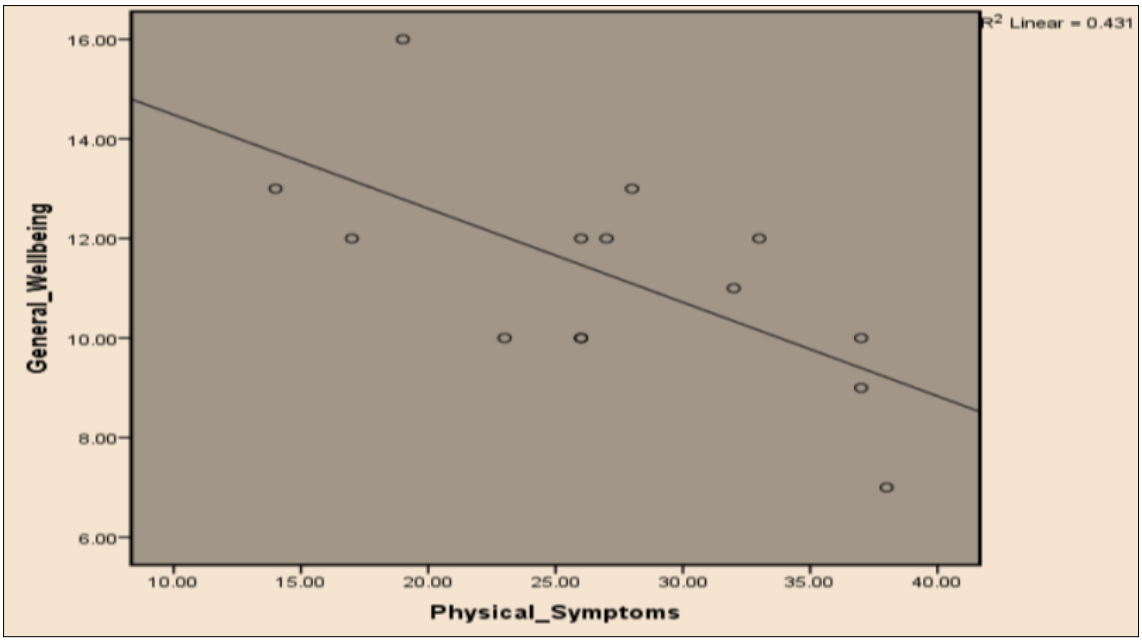

Fig 2: scattered diagram showing correlation physical symptoms & general wellbeing

The scattered plot in Fig.1 also showed that the points are reasonably scattered about an underlying straight line so we can say that there is moderate negative linear correlation between physical symptoms & general well being of chronic kidney disease patients & it suggest that as the physical symptoms increases, general wellbeing of chronic kidney disease patient decreases.

Discussion: Results of the pilot study showed that there was inverse (negative) moderate correlation between the self efficacy & physical symptoms (r = -0.52, p>0.05); physical symptoms & general well being (r = -0.65, p<0.05). The results of the study are in line with study conducted by Mousa et al. (2018) on CKD patients, it revealed moderately positive association between the health related quality of life and self efficacy scores ($r = 0.497$, p value < 0.001). The result are also in consistence with study conducted by Patterson et al. (2014), it revealed significant relationships between Physical Activity and self-efficacy (r = .336), self-regulation (r = .280), and outcome expectations (r = .265) among people on dialysis.

Conclusion

This study concluded that there was moderate (negative) relationship between the self efficacy & physical symptoms; physical symptoms & general wellbeing of chronic kidney disease patients. Promoting the self efficacy may decrease physical symptoms & enhances general well being of chronic kidney disease patients. Research with larger sample is needed.

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